UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

November 18, 2004

MCCORMICK, PAULDING & HUBER LLP
CITYPLACE II
185 ASYLUM STREET
HARTFORD, CT 06103
US

Dear Sir/Madam,

Your refund request for 10694072 in the amount of $452.00 has been denied .

We have no record of an admendment in our data base for this application

Sincerely,

ELEANOR KURTZ
Technical Center Others
703 308-3642

CLAIMS ONLY

SERIAL NO. | FILING DATE

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1ST AMENDMENT		AFTER 2ND AMENDMENT	
	IND	DEP	IND	DEP	IND	DEP
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TOTAL CLAIMS						

What is claimed is:

1. An optical signal coupling for two vehicles coupled with one another, especially rail vehicles coupled with one another, with a first coupling part fixed to one vehicle and a second coupling part fixed to the other vehicle, between which optical signals are transmitted, characterized in that the first coupling part contains a sending device which creates the optical signals to be transmitted, and the second coupling part contains a receiving device which detects the transmitted optical signals.

2. An optical signal coupling according to claim 1, wherein the first coupling part includes a microprocessor which controls the creation of the signals in the sending device.

3. An optical signal coupling according to claim 1, wherein the second coupling part includes a microprocessor which processes the signals detected in the receiving device.

4. An optical signal apparatus according to claim 2, wherein the microprocessor of the first coupling part is so programmed that it merges several individual signals into multiplexed signals and the microprocessor of the second coupling part is so programmed that it divides the multiplexed signals into several individual signals.

5. An optical signal coupling according to claim1, wherein the sending device has at least one LED for creating the optical signal.

6. An optical signal coupling according to claim 1, wherein the receiving device has a photo diode for detecting the optical signal.

7. An optical signal coupling according to claim 1, wherein each of the first and second coupling parts, is a light conducting element, of which elements one has a spherically concave end surface and the other has a spherically convex end surface with an identical radius of curvature and of which at least one is so elastically biased that the light conducting elements are pressed against one another with their end surfaces, when the two vehicles are coupled with one another.

8. An optical signal coupling according to claim 7, wherein each of the light conducting elements includes a light opaque sleeve and a transparent core received in the sleeve.

9. An optical signal coupling according to claim 8, wherein the wall thicknesses of the sleeves in the region of the end surfaces have a value equal to at least 1/10, and preferably of at least 1/5, of the radius of curvature of the end surfaces.

10. An optical signal coupling according to claim 8, wherein the light opaque sleeves are electrically conducting and in that upon the pressing together of the end surfaces the light conducting elements of the first and second coupling parts establish an electrical contact between the associated sleeves through which electric signals from one coupling part can be transmitted to the other coupling part.

11. An optical signal coupling according to claim 10, wherein the section of each sleeve which is part of the end surfaces is plated with hard gold.

12. An optical signal coupling according to claim 10, wherein at least a portion of the signal which is transmitted between the coupling parts as an optical signal is additionally transmitted through the sleeves of the two coupling parts as an electric signal.

13. An optical signal coupling according to claim 7, wherein each of the first and second coupling parts has a housing on one axial end of which a sleeve-like section is formed in which the light conducting element is axially slidably supported and is elastically biased in the direction toward the one axial end, and at the other end of which a connector pin is formed which is designed for placement in a contact carrier.

14. An optical signal coupling according to claim 10, wherein between the sleeve of the light conducting element and the sleeve-like section of the housing of each coupling part an electrical sliding contact exists through which electric signals are transmittable between the sleeve-like section and the sleeve.

15. An optical signal coupling according to claim 13, wherein the connection pin comprises two sections insulated from one another of which one is connected with ground potential and the other of which is connected with an electric signal conductor when the connecting pin is installed in the contact carrier.

16. An optical signal coupling according to claim 1, wherein the coupling parts are arranged in the coupling heads of a mechanical coupling for rail vehicles.

17. A conductive coupling for the connection of conductors of two rail vehicles couplable with one another, with two contact carriers each of which is connected to a respective one of the rail vehicles, wherein at least one signal coupling part with a sending device is arranged in one contact carrier and in that at least one signal coupling par with a receiving device is arranged in the other contact carrier which coupling parts together form an optical signal coupling according to one of claims 1 to 11.

18. A conductive coupling according to claim 17, wherein in each contact carrier is arranged both a signal coupling part with a sending device and a signal coupling part with a receiving device of which coupling parts together form two optical signal couplings according to one of claims 1 to 11.

19. A conductive coupling according to claim 18, wherein the sending device and the receiving device of the coupling parts of each contact carrier are connected with a common microprocessor which controls the generation of the signals in the sending device and processes signals detected in the receiving device.

RAM Fee History Query

Revenue Accounting and Management

Name/Number: 10694072

Total Records Found: 4

Start Date: Any Date

End Date: Any Date

Accounting Date	Sequence Num.	Tran Type	Fee Code	Fee Amount Mailroom Date	Payment Method
10/30/2003	00000133	1	8021	$40.00 10/27/2003	CK
10/30/2003	00000134	1	1001	$770.00 10/27/2003	CK
10/30/2003	00000160	1	1202	$162.00 10/27/2003	DA 130235
10/30/2003	00000161	1	1203	$290.00 10/27/2003	DA 130235

CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING FACSIMILE TRANSMITTED TO THE U.S. PATENT AND TRADEMARK OFFICE ON THE DATE SHOWN BELOW:

Ana R. Rivera
PRINTED NAME OF PERSON SIGNING CERTIFICATE

SIGNATURE 10/4/04
DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Martin Wolfgang Meyer	Group Art Unit 2872
for OPTICAL SIGNAL COUPLING	
Serial No.: 10/694,072	
Filed On: October 27, 2003	Our Docket No. 6841-02

Hartford, Connecticut, October 4, 2004

Facsimile No.: 703-308-5077
Mail Stop 16
Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313

REQUEST FOR REFUND

SIR:

Applicant respectfully requests a refund in the amount of $452.00 be credited to Deposit Account No. 13-0235 for the above-identified application.

As evidenced by the Preliminary Amendment filed on March 30, 2004 and received by the U.S. Patent and Trademark Office on April 1, 2004, all multiple dependencies were removed from the claims in the present application. Therefore, the additional charge of $452.00 to Deposit Account 13-0235 should be accordingly credited back to said Deposit Account. Applicant submits herewith a copy of the Preliminary Amendment filed on March 30, 2004 and a copy of the return receipt stamped postcard indicating receipt by the Office.

In view of the timely filed Preliminary Amendment removing all multiple dependencies, please issue a credit in the amount of $452.00 to Deposit Account No. 13-0235.

Respectfully submitted,

By _____
Richard R. Michaud
Registration No. 40,088
Attorney for Applicant

McCormick, Paulding & Huber LLP
CityPlace II
185 Asylum Street
Hartford, Connecticut 06103-3402
(860) 549-5290

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Ana R. Rivera
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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By _____
Richard R. Michaud
Registration No. 40,088
Attorney for Applicant

McCormick, Paulding & Huber LLP
CityPlace II
185 Asylum Street
Hartford, Connecticut 06103-3402
(860) 549-5290

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313, ON THE DATE INDICATED BELOW.

SIGNATURE OF PERSON MAILING PAPER

3/30/04

DATE OF SIGNATURE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Martin Wolfgang Meyer	Group Art Unit 2872
for OPTICAL SIGNAL COUPLING	
Serial No.: 10/694,072	
Filed On: October 27, 2003	Our Docket No. 6841-02

Hartford, Connecticut, March 30, 2004

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313

PRELIMINARY AMENDMENT

Sir:

Applicant respectfully requests amendment of the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

In the Claims

Applicant respectfully requests amendment of the claims as follows:

1. (Original) An optical signal coupling for two vehicles coupled with one another, especially rail vehicles coupled with one another, with a first coupling part fixed to one vehicle and a second coupling part fixed to the other vehicle, between which optical signals are transmitted, characterized in that the first coupling part contains a sending device which creates the optical signals to be transmitted, and the second coupling part contains a receiving device which detects the transmitted optical signals.

2. (Original) An optical signal coupling according to claim 1, wherein the first coupling part includes a microprocessor which controls the creation of the signals in the sending device.

3. (Original) An optical signal coupling according to claim 1, wherein the second coupling part includes a microprocessor which processes the signals detected in the receiving device.

4. (Original) An optical signal apparatus according to claim 2, wherein the microprocessor of the first coupling part is so programmed that it merges several individual signals into multiplexed signals and the microprocessor of the second coupling part is so programmed that it divides the multiplexed signals into several individual signals.

5. (Original) An optical signal coupling according to claim1, wherein the sending device has at least one LED for creating the optical signal.

6. (Original) An optical signal coupling according to claim 1, wherein the receiving device has a photo diode for detecting the optical signal.

7. (Original) An optical signal coupling according to claim 1, wherein each of the first and second coupling parts, is a light conducting element, of which elements one has a spherically concave end surface and the other has a spherically convex end surface with an identical radius of curvature and of which at least one is so elastically biased that the light conducting elements are pressed against one another with their end surfaces, when the two vehicles are coupled with one another.

8. (Original) An optical signal coupling according to claim 7, wherein each of the light conducting elements includes a light opaque sleeve and a transparent core received in the sleeve.

9. (Original) An optical signal coupling according to claim 8, wherein the wall thicknesses of the sleeves in the region of the end surfaces have a value equal to at least 1/10, and preferably of at least 1/5, of the radius of curvature of the end surfaces.

10. (Original) An optical signal coupling according to claim 8, wherein the light opaque sleeves are electrically conducting and in that upon the pressing together of the end surfaces the light conducting elements of the first and second coupling parts establish an electrical contact between the associated sleeves through which electric signals from one coupling part can be transmitted to the other coupling part.

11. (Original) An optical signal coupling according to claim 10, wherein the section of each sleeve which is part of the end surfaces is plated with hard gold.

12. (Original) An optical signal coupling according to claim 10, wherein at least a portion of the signal which is transmitted between the coupling parts as an optical signal is additionally transmitted through the sleeves of the two coupling parts as an electric signal.

13. (Original) An optical signal coupling according to claim 7, wherein each of the first and second coupling parts has a housing on one axial end of which a sleeve-like section is formed in which the light conducting element is axially slidably supported and is elastically biased in the direction toward the one axial end, and at the other end of which a connector pin is formed which is designed for placement in a contact carrier.

14. (Original) An optical signal coupling according to claim 10, wherein between the sleeve of the light conducting element and the sleeve-like section of the housing of each coupling part an electrical sliding contact exists through which electric signals are transmittable between the sleeve-like section and the sleeve.

15. (Original) An optical signal coupling according to claim 13, wherein the connection pin comprises two sections insulated from one another of which one is connected with ground potential and the other of which is connected with an electric signal conductor when the connecting pin is installed in the contact carrier.

16. (Original) An optical signal coupling according to claim 1, wherein the coupling parts are arranged in the coupling heads of a mechanical coupling for rail vehicles.

17. (Currently Amended) A conductive coupling for the connection of conductors of two rail vehicles couplable with one another, with two contact carriers each of which is connected to a respective one of the rail vehicles, wherein at least one signal coupling part with a sending device is arranged in one contact carrier and in that at least one signal coupling par with a receiving device is arranged in the other contact carrier which coupling parts together form an optical signal coupling according to ~~one of claims 1 to 11~~ claim 1.

18. (Currently Amended) A conductive coupling according to claim 17, wherein in each contact carrier is arranged both a signal coupling part with a sending device and a signal coupling part with a receiving device of which coupling parts together form two optical signal couplings ~~according to one of claims 1 to 11~~.

19. (Original) A conductive coupling according to claim 18, wherein the sending device and the receiving device of the coupling parts of each contact carrier are connected with a common microprocessor which controls the generation of the signals in the sending device and processes signals detected in the receiving device.

REMARKS

The above amendments are being presented to remove multiple dependencies from its claims.

Applicant has now removed all multiple dependencies from the claims and respectfully requests a refund in the amount of $452.00 for the multiple dependency fees charged on October 30, 2003 to Deposit Account 13-0235.

Therefore, please credit a refund in the amount of $452.00 to Deposit Account No. 13-0235.

Should the Examiner have any questions regarding the present application, Applicant respectfully requests that the Examiner contact Applicant's representative at the phone number listed below.

While Applicant believes no fees are due with the filing of this preliminary amendment, please charge any deficiencies in fees associated with this filing to our Deposit Account No. 13-0235.

Respectfully submitted,

By _____
Richard R. Michaud
Registration No. 40,088
Attorney for Applicant

McCormick, Paulding & Huber LLP
CityPlace II
185 Asylum Street
Hartford, Connecticut 06103-3402
(860) 549-5290

Ser/Pat/TM No. 10/694,072
File No. 6841-02
Inventor Name(s). Mayer
Atty/Secretary RRM/BAR

Date Recieved:

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- ☐ Claims - # of pages.....
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- ☑ Amendment Preliminary
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- ☐ Assignment
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